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HEALTH STATISTICS

FROM THE U. S. NATIONAL HEALTH SURVEY

Arthritis and Rheumatism reported in interviews

United States
July 1957 - June 1959

Statistics on prevalence of arthritis and rheumatism and the disability due to these conditions by age, sex, and medical care status. Based on data collected in household interviews during the period July 1957-June 1959.

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The U. S. National Health Survey is a continuing program under which the Public Health Service makes studies to determine the extent of illness and disability in the population of the United States and to gather related information. It is authorized by Public Law 652, 84th Congress.

CO-OPERATION OF THE BUREAU OF THE CENSUS

Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies. For the Health Interview Survey the Bureau of the Census designed and selected the sample, conducted the household interviews, and processed the data in accordance with specifications established by the Public Health Service.

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ARTHRITIS AND RHEUMATISM

The various forms of arthritis and the allied diseases usually referred to as "rheumatism" are of particular importance in the study of chronic disease because of the great amount of disability for which they are responsible. The magnitude of this disability is explained by the high prevalence of these diseases in the population which, in turn, is due to the long duration of individual cases. Moreover, in contrast to many other chronic conditions of a serious nature, arthritis is characterized by a comparatively low fatality rate. The combined effect of the long duration and the low death rate is the accumulation of cases of arthritis and rheumatism in the population, thus producing a high prevalence rate at any point in time.

In the estimation of the national prevalence of arthritis and rheumatism particular care should be exercised in defining the terms of reference. Comprehensive data on which to base an estimate of <u>all diagnosable cases</u> in the population are not available. Community surveys in which samples of the population were given careful medical examination provide some information on prevalence based on clinical evidence.

For example, in the Baltimore phase of the studies sponsored by the Commission on Chronic Illness during 1953-54, a prevalence rate of 75 per 1,000 population was obtained for arthritis, exclusive of rheumatism, from a clinical evaluation of a weighted sample of persons interviewed. The Hunterdon phase of these studies produced a rate of 80 persons per 1,000 population for arthritis, exclusive of rheumatism.

On the basis of medical history, examination, and X-ray studies of 707 persons, a subsample of persons interviewed in the Arsenal Health District of Pittsburgh³ during 1953-54, 71 persons per 1,000 population 15 years and older were found to have classical arthritis, and 147 per 1,000 had definite arthritis, a total rate of 218 per 1,000 persons age 15 and older. In this study classical arthritis cases are defined as those in which the physician was certain of the diagnosis, i.e., the case would fit a textbook description of one of the rheumatic diseases. Definite arthritis cases are

This report was prepared by Geraldine A. Gleeson of the U. S. National Health Survey staff.

defined as those for which the physician was certain that the individual had some form of arthritis, but the differential diagnosis was not perfectly clear.

While experts in the field have been hesitant to state what the total prevalence may be, statistics provided by studies, such as those cited, indicate that the national prevalence of arthritis alone is in excess of 12 million cases.

In the studies conducted by clinical examination, not all of the cases detected have developed to the stage where they have become a real problem to the affected individuals. Many have not even caused the person to seek medical care. Nevertheless, for meaningful epidemiological study of these diseases, clinical examination data are usually necessary. At the present time such data are available only for a few carefully studied communities.

As a measure of the impact that arthritis and rheumatism have upon the lives of those afflicted with the diseases, statistics from household interview surveys have been used. Statistics collected by this method must be used with a clear recognition of their qualifications.

In contrast to the concept of all diagnosable cases used in clinical examination studies, the cases of arthritis and rheumatism reported in household interviews represent a group of conditions less clearly defined diagnostically. If attended by a physician, they reflect the efforts of the family respondent to transmit to the interviewer whatever the physician has said about the condition. The terms in which such cases are reported range from specific medical terminology to simply "arthritis." Cases designated as "arthritis" that have never been medically attended probably represent the labeling of symptoms related to intermittent or persistent pain of the joints or muscles that has continued for some time.

Although it is impossible to set precise diagnostic limits on cases classified as arthritis or rheumatism in household interview surveys, it can be said of these cases that they have progressed to the point where they are of some concern to the persons affected. Household interview statistics measure the levels of this vaguely defined group of conditions in terms of cases reported because they have to some degree interfered with normal

living. The extent of this interference can be determined by interviews in terms of bed disability, loss of time from work, and limitation of activity and mobility.

Considering the uncertainty of the disease classifications that are labeled as arthritis and rheumatism in household surveys, it is remarkable that various surveys of this type have produced consistent results. In the Kansas City Metropolitan Area Survey⁴ conducted during 1953-54 it was found that 63 persons per 1,000 population in that area reported arthritis or rheumatism. The California Health Survey⁵ (1954-55) produced a rate of 59 persons with arthritis or rheumatism per 1,000 population. Survey results from the Hagerstown, Md., studies⁶ (1955-57) yielded an estimate of 64 cases per 1,000 population.

On the basis of data from the U.S. National Health Survey during the period July 1957-June 1959, an estimated 10,845,000 persons in the United States were reported to have arthritis or rheumatism. This represents a rate of approximately 64 cases per 1,000 population, ranging from 2 cases per 1,000 among persons under 25 years of age to 286 per 1,000 among persons 75 years and older.

The remainder of this report deals with results of interviewing for the National Health Survey in greater detail. The statistics should be interpreted in light of the foregoing discussion.

SOURCE OF DATA ON CHRONIC CONDITIONS

Data on chronic conditions in the U.S. National Health Survey are based primarily on replies to four "illness-recall" questions in the health household interview.

- Were you sick at any time last week or the week before?
- 2. Last week or the week before did you take any medicine or treatment for any condition?
- 3. At the present time do you have any ailments or conditions that have lasted for a long time? (If "No") Even though they don't bother you all the time?
- 4. Has anyone in the family had any of these conditions during the past 12 months? (Interviewer reads list of major chronic conditions which includes "arthritis or rheumatism.")

Positive responses concerning the diseases with which this report is concerned may come from any one of the four questions. The unduplicated positive replies serve as the basis for estimates of prevalence of the diseases in the population. Because the estimates are based on a continuing sample of household interviews throughout a 24-month period (July 1957-June 1959), the prevalence is actually an average prevalence during the 2-year period, that is, the average

number of cases of arthritis and rheumatism existing in the population during that period.

Further questions are asked regarding each reported condition to obtain a more explicit description of its nature, and to obtain facts about medical attendance and disability. These facts are used to classify conditions by diagnosis and to establish the criteria of severity which are shown in this report.

Because of the possibilities for error in the reporting of the rheumatic diseases, a detailed classification of the conditions reported in a health interview survey is not warranted. In this report arthritis and rheumatism will be considered as a disease category including conditions affecting the musculoskeletal system and described by respondents as rheumatic or arthritic in nature.

In National Health Survey data, the disease category "arthritis and rheumatism" (International Lists Nos. 720-727) includes, in general, rheumatoid arthritis, osteoarthritis, lumbago, other specified or unspecified forms of arthritis, and muscular and unspecified forms of rheumatism. The category does not include rheumatic fever (400-402), sciatic neuritis (363), prolapsed disc (735), nor does it include symptoms related to the musculoskeletal system unless they were described by the respondent as arthritic or rheumatic in nature.

Even though arthritis and rheumatism are technically classified as separate disease entities in the coding procedure used in the National Health Survey, the two terms are in popular usage considered to be practically synonymous. It seems unlikely that any appreciable number of individuals would consider themselves to be afflicted with both arthritis and rheumatism. It is felt therefore, that combining the prevalence estimates for these diseases into a disease category results in very little duplication, and that the resultant prevalence figure is essentially an estimate of the number of persons with rheumatic disease affecting the musculoskeletal system.

A description of the statistical design of the household survey, and general qualifications of the data presented in the report are given in Appendix I. Particular attention is called to the section in Appendix I on Reliability of Estimates, which includes tables of sampling errors and instructions for their use. Explanations and definitions of special terms and concepts used in this report are presented in Appendix II.

PREVALENCE OF ARTHRITIS AND RHEUMAITISM

Estimates based on clinical experience and survey studies have shown the prevalence of arthritis and rheumatism to be higher among females than among males. While this sex differential is apparent in National Health Survey data, it is quite possible that the difference in the rates

Table A. Percent distribution of cases of arthritis and rheumatism according to medical care status by sex: United States, July 1957-June 1959

		Medical1	Never		
Sex	Total	Under care	Not under care	medically attended	
Both sexes	100.0	39.4	41.7	18.9	
Male	100.0	34.5	43.0	22.4	
Female	100.0	42.0	40.9	17.0	

by sex, 46 cases per 1,000 males and 81 cases per 1,000 females, is unduly influenced by the preponderance of female respondents in the household interview. Conditions, such as arthritis and rheumatism, that are sometimes self-diagnosed on the basis of symptoms, or are not under continuous medical care are more frequently reported by self-respondents than by "proxy" respondents, i.e., related persons living in the same household.

The prevalence of arthritis and rheumatism by age for males and females is shown in figure 1. A higher proportion of the cases among females, 42 percent, were under the care of a physician as compared with about 35 percent of the cases among males. About 17 percent of females with arthritis or rheumatism had never been seen by a physician, while approximately 22 percent of the males had never had medical attention for their condition (table A).

A general idea of the severity of arthritis and rheumatism can be gained from table 2, which shows the number and percent distribution of cases of these diseases causing bed disability. About 11 percent of the persons with these diseases had 1 or more days of bed disability during the 12-month period prior to interview, and about 7 percent had 7 or more days of bed disability. These percents are quite consistent for each of the age-sex groups shown in the table. However, it must be remembered that these percents merely represent the proportion of cases in each group that had at least 1 or at least 7 bed-disability days, but give no indication of differences in the range of number of bed-days per person in the various age-sex groups.

DISABILITY DUE TO ARTHRITIS AND RHEUMATISM

The National Health Survey collects data that measure two aspects of the disability associated with chronic conditions: one, long-term disability described as limitation of activity and mobility, and the other, comparatively short periods of disability measured in terms of disability days.

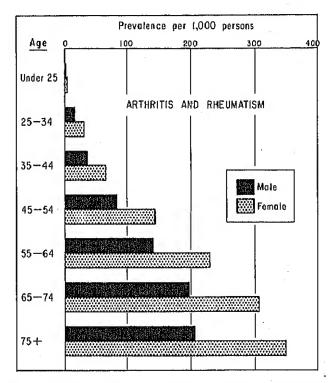


Figure 1. Prevalence of arthritis and rheumatism' per 1,000 population by sex and age.

For certain conditions, either one or the other of these measures is appropriate in the assessment of social and economic losses due to the condition. For others the two measures tend to complement each other in describing the impact of the condition. This is particularly true for conditions such as arthritis and rheumatism which cause a fair proportion of those afflicted to be completely disabled while others continue in their usual activity with occasional short periods of disability.

Long-Term Disability

In terms of activity limitation, about 25 percent of the persons with arthritis or rheumatism

were either unable to carry on their major activity or were limited in the amount or kind of major or outside activities (table 3). This combined rate of partial and major limitation of activity was consistent for males and females, with the rate for each of the sexes displaying the same pattern of increase with age. However, when major limitation of activity (inability to carry on major activity) was considered apart from partial limitation, a larger proportion of the males were in the major limitation category. This sex differential is not surprising in view of the greater expectation of physical fitness in males for the performance of usual activities.

Approximately 10 percent of persons with arthritis or rheumatism had limitation of mobility due to these diseases in that they were confined to the house, except in emergencies, or were limited or needed help in getting around outside the house. The increase in limitation of mobility with age is similar to that for limitation of activity, with the exception that a significantly higher percent of females 65 years of age and over (21 percent) had mobility limitation than was noted for males in this age group (14 percent). This difference may be explained to some extent by the greater number of females in the older age years within this broad age category 65 years and older.

The long-term disability due to arthritis and rheumatism in terms of limitation of activity and mobility is summarized graphically in figure 2. The means by which this information was collected is contained in Appendix III (cards C-G), and a comprehensive definition of partial and major limitation can be found in Appendix II.

Disability Days:

In National Health Survey data, three types of disability days are used to describe the extent to which a person's activity is reduced as a result of a disease or condition. The most inclusive of these is a day of restricted activity; by definition, a day on which a person had to cut down on his usual activities for the whole of that day because of his condition. Such a day is considered to be a day of bed disability if the condition kept him in bed for all or most of the day. A day of restricted activity may also be a day lost from work if the person involved was 17 years of age or over and would have been working if he had not been ill.

Approximately 238 million days of restricted activity per year were attributed to arthritis and rheumatism (table 5). In accordance with the higher prevalence of these conditions among females, about 154 million days were reported for

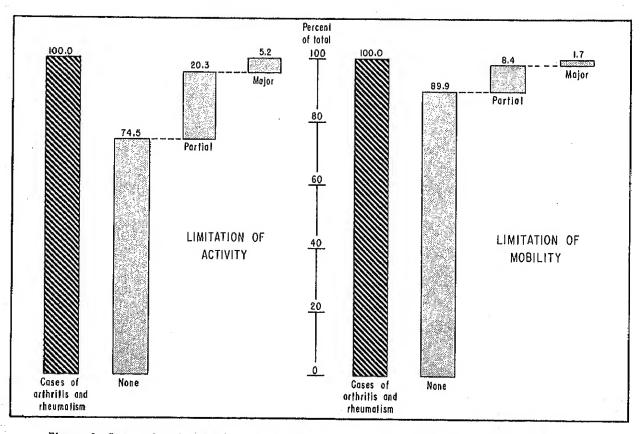


Figure 2. Cases of arthritis and rheumatism according to activity and mobility limitation.

females, and 84 million for males. However, in terms of restricted-activity days per person per year, there was no difference in the average number of days for men and for women (22 restricted-activity days per person with arthritis or rheumatism per year). For both sexes there was a gradual increase with age in the number of restricted-activity days per person for those over 25 years of age.

Approximately 60 million, or one fourth of the 238 million restricted-activity days, were bed-disability days. This represents an average of 5.6 bed-days per person per year, with no appreciable difference in the rate for both sexes (fig. 3). As in the case of the restricted-activity

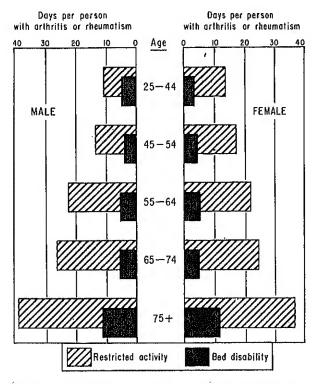


Figure 3. Average number of disability days per year per person with arthritis or rheumatism by sex and age.

days, there was a gradual increase with age in the number of bed-days per person, from 3.9 days per person 25-44 years of age to 11.4 days per person 75 years and older (table B).

These rates of bed disability estimate the total impact of the rheumatic diseases. While they are appropriate to use in comparing the disability caused by these diseases with that attributable to other chronic conditions, they do not adequately describe the effect on the disabled individual. The effects of the rheumatic diseases vary from slight pain or stiffness to total invalidism. This means that many persons with rheumatic conditions have

Table B. Bed-disability days per person with arthritis or rheumatism and per person with 1 or more bed-days attributable to arthritis and rheumatism by age: United States, July 1957-June 1959

	Bed-dis days pe	ability r year
Age	Per person with the condition	Per person with 1 or more bed-days attributed to the condition
A11 ages-25+	5.6	50.4
25-44 45-54 55-64 65-74 75+	3.9 4.2 5.2 5.1 11.4	30.6 36.9 45.8 54.7 103.3

little or no bed disability, while others may be totally bed-ridden. From data shown in table 2, it may be noted that only 1,223,000 persons, about 11 percent of the 10,845,000 persons with arthritis or rheumatism, were disabled to the extent of having any bed disability. Thus, although the number of bed-days per year per person 25 years or older with arthritis or rheumatism was only 5.6, the average number of bed-days for those persons who were sick enough to spend at least one day in bed was 50.4 (table B).

Various measures of the amount of work loss associated with arthritis and rheumatism are presented in table 6. Approximately 27 million days of work loss were attributed to arthritis and rheumatism, of which 17 million days were lost by persons who reported "usually working" as their major activity. Due to the higher proportion of males in the working population, about 19 million work-days were lost by all males and 12 million by "usually working" males, compared with 8 million work-days by all females and 5 million by "usually working" females.

Work-loss days per year perperson with arthritis and rheumatism (col. 3 of table 6) was obtained by dividing total work-loss days by the number of persons with arthritis or rheumatism. To obtain the number of work-loss days per "usually working" person with arthritis and rheumatism (col. 4), the number of days for "usually working" persons was divided by the number of "usually working" persons with arthritis and rheumatism. The final column of table 6 shows the number of days attributable to arthritis and rheumatism.

mation per "usually working" person in the population. This rate is a very broad measure of the effect of disability due to arthritis and rheumatism on the general economy of the population. It is most meaningful when used with comparable rates

for other types of disabling conditions to determine the relative amount each condition contributes to the total amount of time lost by "usually working" persons.

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Table 1. Average prevalence of arthritis and rheumatism as reported in interviews by sex and age according to medical attention: United States, July 1957-June 1959

Data are based on household interviews during July 1957-June 1959. Data refer to the civillan noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix 1. Definitions of terms are given in Appendix 1.

Sex and age		Medic	ally a	ttended	Never			cally a	ttended	Never
Sex and age	Total	Total	Under care	Not under care	cally at- tended	Total	Total	Under care	Not under care	medi- cally at- tended
	Ave	erage nu	mber i	thous	ands		Rate	per 1,	000 popi	ılation
Both sexes		4								
All ages	10,845	8,792	4,272	4,520	2,053	63.9	51.8	25.2	26.6	12.1
Under 25	187 533	143 407	56 166	87 241	44 125	2.5 23.6	1.9 18.0	0.7 7.4		0.6 5.5
35-44 45-54	1,204 2,253	983 1,846	430 862	553 985	221 407	52.3 113.6	42.7 93.1	18.7 43.5	24.0 49.7	9.6 20.5
55-64	2,769 2,477	2,253 2,011	1,092 1,037	1, 1 61 974	516 466	185.5 255.4	150.9 207.4	73.1 106.9	77.8 100.4	34.6 48.1
75+	1,421	1,147	628	519	274	286.0	230.8	126.4	104.4	55.1
<u>Male</u>									,	
A11 ages	3,806	2,952	1,314	1,638	854	46.1	35.7	15.9	19.8	10.3
Under 25 25-34	69 176	56 125	(*) 49	(*) 77	(*) 51	1.9 16.3	1.5 11.6	(*) 4.5	(*) 7.1	(*) 4.7
35-44 45-54	412 808	332 640	129 281	203 359	80 168	37.2 83.5	30.0 66.1	11.7 29.0	18.3 37.1	7.2 17.4
55-64	998 898	770 700	337 328	433 373	228 198	138.9 198.2	107.2 154.5	46.9 72.4	60.3 82.3	31.7 43.7
75+	444	327	163	164	117	205.8	151.6	75.6	76.0	54.2
<u>Female</u>										
All ages	7,038	5,840	2,958	2,882	1,198	80.7	67.0	33.9	33.0	13.7
Under 25	119 356	87 282	(*) 118	57 165	(*) 74	3.2	2.3 23.9	(*)· 10.0	(*) 14.0	(*) 6.3
35-44 45-54	792 1,445	651 1,206	301 581	350 625	141 239	66.3	54.5 118.7	25.2 57.2	29.3 61.5	11.8 23.5
55-64 65-74	1,771 1,579	1,483	755 709	728 601	288 268	228.6	191.4 253.7	97.5 137.2	94.0 116.3	37.2 51.9
75+	977	820	465	355	156	347.4	291.6	165.4	126.2	55.5

Table 2. Average number and percent distribution of persons with arthritis or rheumatism as reported in interviews according to amount of bed disability by sex and age: United States, July 1957-June 1959

[Data are based on household Interviews during July 1957—June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix 1. Definitions of terms are given in Appendix 11]

are given in Apper	odix IIJ							
Sex and age	Total	With no bed-dis- ability days	With 1+ bed-dis- ability days	With 7+ bed-dis- ability days	Total	With no bed-dis- ability days	With 1+ bed-dis- ability days	With 74- bed-dis- ability days
	Numb	er of person	ns in thou	ands		Percent di	stribution	ı
Both sexes								1
All ages	10,845	9,622	1,223	759	100.0	88.7	11.3	7.0
Under 25 25-34	187 533	147 455	(*) 77	(*) 46	100.0 100.0	78.6 85.4	(*) 14.4	(*) 8.6
35-44 45-54	1,204 2,253	1,060 1,996	144 258	84 145	100.0 100.0	88.0 88.6	12.0 11.5	7.0 6.4
55-64 65-74	2,769 2,477	2,452 2,248	317 229	209 143	100.0 100.0	88.6 90.8	11.4 9.2	7.5 5.8
75+	1,421	1,264	157	110	100.0	89.0	11.0	7.7
Male						į		
All ages	3,806	3,393	414	265	100.0	89.1.	10.9	7.0
Under 25 25-34	69 176	54 149	(*) (*)	(*) (*)	100.0	78.3 84.7	(*)	(*) (*)
35-44 45-54	412 808	364 717	48 92	(*) 53	100.0 100.0	88.3 88.7	11.7 11.4	(*) 6.6
55-64	998 898	880 825	117 73	78 42	100.0 100.0	88.2 91.9	11.7 8.1	7.8
75+	444	403	41	(*)	100.0	90.8	9.2	(*)
<u>Female</u>								
All ages	7,038	6,230	809	494	100.0	88.5	11.5	7.0
Under 25	119 356	94 306	(*) 50	(*) (*)	100.0 100.0	79.0 86.0	(*) 14.0	1
35-44 45-54	792 1,445	696 1,279	96 166	51 92	100.0	87.9 88.5	12.1 11.5	_
55-64 65-74	1,771 1,579	1,571 1,423	200 156	131 102		88.7 90.1		
75+	977	861	116	78	100.0	88.1	11.9	8.

Table 1. Average prevalence of arthritis and rheumatism as reported in interviews by sex and age according to cal attention: United States, July 1957-June 1959

[Data are based on household interviews during July 1957-June 1959. Data refer to the civilian noninstitutional insulation of the United States. Detailed figures may not add to totals due to rounding. The survey design, and information on the reliability of the estimates are given in Appendix 1. Definitions of the are given in Appendix 1.

						.,				
Con and an			cally a	ttended	Never		L	cally a	ttended	115.05.1
Sex and age	Total	Total	Under care	Not under care	cally at- tended	Total	Total	Under care	Not under care	medi- cally at- tended
	Ave	erage n	umber i	n thous	ands		Rate	per 1,	000 рор	ulation
Both sexes										
All ages	10,845	8,792	4,272	4,520	2,053	63.9	51.8	25.2	26.6	12.1
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35-44	1,204 2,253	983 1,846	430 862	553 985	221 407	52.3 113.6		18.7 43.5		9.5 20.5
55-64 65-74	2,769 2,477	2,253 2,011	1,092 1,037	1,161 974	516 466	185.5 255.4	150.9 207.4	73.1 106.9	77.8 100.4	34.5 48.1
75+	1,421	1,147	628	519	274	286.0	230.8	126.4	104.4	55.1
<u>Male</u>				61						
All ages	3,806	2,952	1,314	1,638	854	46.1	35.7	15.9	19.8	10.3
Under 25 25-34	69 176	56 125	(*) 49	(*) 77	(*) 51	1.9 16.3	1.5 11.6	(*) 4.5	(*) 7.1	(*) 4.7
35-44 45-54	412 808	332 640	129 281	203 359	80 168	37.2 83.5	30.0 66.1	11.7 29.0	18.3 37.1	7.2 17.4
55-64 65-74	998 898	770 700	337 328	433 373	228 198	138.9 198.2	107.2 154.5	46.9 72.4	60.3 82.3	31.7 43.7
75+	444	327	163	164	117	205.8	151.6	75.6	76.0	54.2
<u>Female</u>										
All ages	7,038	5,840	2,958	2,882	1,198	80.7	67.0	33.9	33.0	13.7
Under 25	119 356	87 282	(*) 1·18	57 165	(*) 74	3.2 30.2	2.3 23.9	(*)· 10.0	(*) 14.0	(*) 6.3
35-44 45-54	792 1,445	651 1,206	301 581	350 625	141 239	66.3 142.3	54.5 118.7	25.2 57.2	29.3 61.5	11.8 23.5
55-64	1,771 1,579	1,483 1,311	755 709	728 601	288 268	228.6 305.6	191.4 253.7	97.5 137.2	94.0 116.3	37,2 51.9
75+	977	820	465	355	156	347.4	291.6	165.4	126.2	55.5

Table 2. Average number and percent distribution of persons with arthritis or rheumatism as reported in interviews according to amount of bed disability by sex and age: United States, July 1957-June 1959

[Data are based on household interviews during July 1957-June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix i. Definitions of terms are given in Appendix II]

are given in Appen	a(x ,.)							
Sex and age	Total	With no bed-dis- ability days	With 1+ bed-dis- ability daya	With 74 bed-dis- ability days	Total	With no bed-dis- ability days	With 1+ bed-dis- ability days	With 7+ bed-dis- ability days
	Numl	er of person	ns in thous	sands		Percent di	stribution	1
Both sexes							1	l
All ages	10,845	9,622	1,223	759	100.0	88.7	11.3	7.0
Under 25	187 533	147 455	(*) 77	(*) 46	100.0	78.6 85.4	(*) 14.4	(*) 8.6
35-44 45-54	1,204 2,253	1,060 1,996	144 258	84 145	100.0 100.0	88.0 88.6	12.0 11.5	7.0 6.4
55-64 65-74	2,769 2,477	2,452 2,248	317 229	209 143	100.0 100.0	88.6 90.8	11.4 9.2	7.5 5.8
75+	1,421	1,264	157	110	100.0	89.0	11.0	7.7
Male								
All ages	3,806	3,393	414	265	100.0	89.1	10.9	7.0
Under 25 25-34	69 176	54 149	(*) (*)	(*) (*)	100.0	78.3 84.7	(*) (*)	(*) (*)
35-44 45-54	412 808	364 717	48 92	(*) 53	100.0 100.0	88.3 88.7	11.7 11.4	(*) 6.6
55-64 65-74	998 898	880 825	117 73	78 42	100.0 100.0	88.2 91.9	11.7 8.1	
75+	444	403	41	(*)	100.0	90.8	9.2	(*)
Female								
All ages	7,038	6,230	809	494	100.0	88.5	11.5	7.0
Under 25 25-34	119 356	94 306	(*) 50	(*) (*)	100.0	79.0 86.0	(*) 14.0	(*)
35-44 45-54	792 1,445	696 1,279	96 166	51 92	100.0	87.9 88.5		
55-64 65-74	1,771 1,579	1,571 1,423	200 156	131 102	100.0	88.7 90.1		
75+	977	861	116	78	100.0	88.1	11.9	8.0

Table 5. Average annual number of disability days associated with arthritis and rheumatism and disability days per person with arthritis or rheumatism per year as reported in interviews by sex and age: United States, July 1957—

[Data are based on household interviews during July 1957-June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II]

	Disability days					
Sex and age	Restrict	ed activity	Bed disability			
Jon una age	Number (in thousands)	Per person with the condition per year	Number (in thousands)	Per person with the condition per year		
Both sexes						
All ages	237,961	21.9	60,408	5.		
Under 25	3,703 22,097	19.8 12.7	(*) 6,760	(* 3.		
45-54 55-64 65-74	35,917 60,996	15.9 22.0	9,525 14,507	4.2 5.2		
75+	62,155 53,094	25.1 37.4	12,531 16,216	5.1 11.4		
Male			!			
All ages	83,592	22.0	21,655	. 5.7		
Under 2525-44	(*) 6,391	(*) 10.9	(*) 2,821	(*) 4.8		
45-5455-64	11,059 22,438	13.7 22.5	3,173 5,231	3.9 5.2		
65-74	23,558 17,218	26.2 38.8	4,918 5,007	5.5 11.3		
<u>Female</u>		:				
All ages	154,369	21.9	38,753	5.5		
Inder 25	(*) 15,706	(*) 13.7	(*) 3,939	(*) 3.4		
5-64	24,858 38,558	17.2 21.8	6,352 9,276	4.4 5.2		
55-74	38,596 35,876	24.4 36.7	7,613 11,209	4.8 11.5		

Table 6. Average annual number of work-loss days associated with arthritis and rheumatism and number of work-loss days per person with arthritis or rheumatism and per "usually working" person per year as reported in interviews by sex and age: United States, July 1957-June 1959

[Data are based on nousehold interviews during July 1957-June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix 1. Definitions of terms are given in Appendix II]

		.oss days nousands)	Work-	loss days pe	r year
Sex and age	Total	Among "usually working" persons	Per person with the condition	Per "usu- ally work- ing" per- son with the con- dition	Per "usu- ally work- ing" per- son
Both sexes					
All ages-17+	27,126	16,782	2.5	4.4	0.3
17-44 45-54	5,164 6,971	4,006 4,191	2.7 3.1	4.4 3.5	0.1 0.3
55-64	9,810 5,180	5,719 2,866	3.5 1.3	4.9 5.4	0.7 1.1
Male					
All ages-17+	18,814	11,931	5.0	4,9	0.3
17-44	3,980 4,246	3,229 3,114	6.2 5.3	5.6 4.3	0.1 0.3
55-64	5,801 4,787	2,777 2,812	5.8 3.6	3.7 7.7	0.5 1.3
Female					
All ages-17+	8,312	4,851	1.2	3.5	0.3
17-44	(*) 2,725	(*) 1,077	(*) 1.9	(*) 2.3	(*) 0.3
55-64	4,009 (*)	2,942	2.3 (*)	6.8 (*)	1.3 (*)

Table 7. Average population used in obtaining rates shown in this publication by age and sex: United States, July 1957-June 1959

[Data are based on household interviews during July 1957-June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II]

	Both sexes Male			Female		
Age	Total	Persons with arth- ritis or rheumatism	Total	Persons with arth- ritis or rheumatism	Total	Persons with arth- ritis or rheumatism
	Population in thousands					
All ages	169,835	10,845	82,633	3,806	87,202	7,038
Under 25	74,826 22,558 23,021	187 533 1,204	37,233 10,783 11,072	69 176 412	37,593 11,776 11,949	119 356 792
45-54 55-64 65-74 75+	19,833 14,930 9,698 4,969	2,253 2,769 2,477 1,421	9,675 7,183 4,530 2,157	808 998 898 444	10,157 7,747 5,167 2,812	1,445 1,771 1,579 977

NOTE: For official population estimates for more general use, see Sureau of the Census reports on the civillan population of the United States, in Current Population Reports: Series P-20, P-25, P-50, P-57, and P-60.

Table 8. Average population used in obtaining work-loss rates shown in this publication by sex and age: United States, July 1957-June 1959

[Data are based on household interviews during July 1957-June 1959. Data refer to the civilian noninstitutional population of the United States. Detailed figures may not add to totals due to rounding. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II]

Sex and age	Persons with arthritis or rheumatism	"Usually work- ing" persons with arth- ritis or rheumatism	"Usually work- ing" persons
Both sexes	Pop	ulation in thous	ands
All ages-17+	10,803	3,813	59,393
17-44	1,883 2,253	915 1,187	35,230 13,083
55-6465+	2,769 3,898	1,178 533	8,369 2,711
Male			
All ages-17+	3,788	2,413	41,672
17-44	639 808	576 724	24,494 9,0 3 6
55-64	998 1,343	747 366	6,047 2,095
<u>Female</u>			
All ages-17+	7,015	1,400	17,721
17-44	1,244 1,445	338 463	10,736 4,047
55-64	1,771 2,555	431 168	2,322 617

NOTE: For official population estimates for more general use, see Bureau or the Census reports on the civillan population of the United States, in <u>Current Population Reports</u>: Series P-20, P-25, P-50, P-57, and P-60.

APPENDIX I

TECHNICAL NOTES ON METHODS

Background of This Report

This report on Arthritis and Rheumatism is one of a series of statistical reports covering separate health-related topics which are prepared by the U. S. National Health Survey. The report is based on information collected in the continuing nationwide sample of households in the Health Interview Survey, which is a main aspect

of the program.

The Health Interview Survey uses a questionnaire which, in addition to personal and demographic characteristics, elicits information on illnesses, injuries, chronic conditions, medical care, dental care, and hospitalization. As interview data relating to each of these various broad subject areas are tabulated and analyzed, separate reports are issued covering one or more specific topics. The present report contains data for 104 weeks of interviewing ending June 28, 1959.

The population covered by the sample for the Health Interview Survey is the civilian population living in the United States at the time of the household interview. Although the sample collection covers persons who are inmates of institutions, data for these persons are not included in the figures given in these reports. Also the sample does not include members of the Armed Forces, United States nationals living in foreign countries, and crews of yessels.

Statistical Design of the Health Interview Survey

General plan, - The sampling plan of the survey follows a multistage probability design which permits a continuous sampling of the civilian population of the United States. This plan utilizes the 1,900 Primary Sampling Units consisting of counties, groups of contiguous counties, and Standard Metropolitan Statistical Areas into which the country has been divided. The first stage of the design consists of drawing a sample from these Primary Sampling Units (PSU's). During the first 18 months of the Health Interview Survey the sample size was 372 PSU's. This was increased to 500 PSU's in January 1959. However, the basic sampling design and methods of estimating remained unchanged during the two-year period covered by this report. The number of ratio estimating classes shown subsequently in this Appendix are those which applied to the first 18 months of the survey.

With no loss in general understanding, the remaining stages of the sampling can be telescoped and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined, also geographically, in such a manner that each segment contains an expected six households. Each week a random sample of about 120 segments is drawn. In the approximately 700 households in those segments, persons are interviewed concerning illnesses, injuries, chronic conditions, disability, and other factors related to health.

The household members included each week are a representative sample of the population so that samples for successive weeks can be combined into larger samples for, say, a calendar quarter, a year, or more. Thus the design permits both continuous measurement of characteristics of high incidence or prevalence in the population and, through the larger consolidated samples, more detailed analysis of less common characteristics and smaller categories. The continuous collection has administrative and operational advantages as well as technical assets, since it permits field work to be handled with an experienced, stable staff.

Sample size and geographic detail.—The national sample plan during the 24-month period ending June 1959 included approximately 235,000 persons from 73,000 households in 12,200 segments. The over-all sample was designed in such a fashion that tabulations can be provided for various geographic sections of the United States and for urban and rural sectors of the

Nation.

Collection of data.—The field operations for the household survey are performed by the Bureau of the Census under specifications established by the Public Health Service. In accordance with these specifications the Bureau of the Census designs and selects the sample, conducts the field interviewing, and edits and codes the questionnaires. Tabulations are prepared by the Public Health Service using the Bureau of the Census electronic computers.

Estimating methods.—Each statistic produced by the survey is the result of two stages of ratio estimation. In the first of these, the factor is the ratio of the 1950 decennial U. S. total population count to the estimated population in 1950 of the U. S. National Health Survey's first-stage sample of PSU's. This factor is applied separately for more than 50 color-residence

classes.

Later, ratios of sample-produced estimates of the population to official Bureau of the Census figures for current population in about 60 age-sex-color classes are computed, and serve as second-stage factors for ratio estimating.

The effect of the ratio estimating process is to make the sample more closely representative of the population by age, sex, color, and residence, thus re-

ducing sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of that population. Consolidation of samples over a time period such as a calendar quarter produces estimates of average characteristics of the U.S. population for that calendar quarter.

For prevalence statistics based on two years of data collection, figures are first calculated for each calendar quarter by averaging estimates for all weeks of interviewing in that quarter. Prevalence data based on eight quarters of interviewing are then obtained by averaging the eight quarterly figures.

For statistics measuring the number of occurrences during a specified time period, a similar computational procedure is used, but the statistics have a different interpretation. For the disability-day items, the interviewer asks for the respondent's experience over the two calendar weeks prior to the week of interview. Then, the estimated quarterly total for a statistic is simply 6.5 times the average two-week estimate produced by the 13 successive samples taken during the period. Thus, the experience of persons interviewed during a year-experience which actually occurred for each person in a two-calendar-week interval prior to week of interview-is treated in analysis as though it measured the total of such experience occurring in the year. For most statistics such interpretation leads to no significant bias. As noted earlier, the interviewing and estimation procedures are designed to reproduce the experience during the reference period of the questionnaire only for the population still living at the time of interview.

General Qualifications

Nonresponse.—Data are adjusted for nonresponse by a procedure which imputes to persons in a household not interviewed the characteristics of persons in households which were interviewed in the same segment. The total noninterview rate is 5 percent; 1 percent is refusal, and the remainder is accounted for by other reasons, such as failure to find any household respondent after repeated trials.

The interview process.—The statistics presented in this report are based on replies secured by interviewing members of the sampled households. Each person, 18 years and over, available at the time of interview, is interviewed individually. Proxy respondents within the household are employed for children and for adults who are not available at the time of the interview, provided the respondent is closely related to the person about whom information is being obtained.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information the household respondent, can, at best, pass on to the interviewer only the information the physician has given to the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. However, other types of facts such as the number of disability days caused by the condition can be obtained more accurately from household members than from any other source.

Rounding of numbers.—The original tabulations on which data in this report are based show all estimates to the nearest whole unit. All consolidations are made from these original tabulations before the numbers are rounded to the nearest thousand for the published tables. Derived statistics such as rates and percent distributions are computed after the estimates have been rounded. Rounding to thousands has been done throughout this report even though, because of sampling error, the estimates may not be accurate to that detail.

Population figures.—Some of the published tables include population figures for specified categories. Except for certain over-all totals by age and sex (which are independently estimated), these figures are based on the sample of households in the U. S. National Health Survey. They are given primarily for the purpose of providing denominators for rate computation, and for this purpose are more appropriate for use with the accompanying measures of health characteristics than

other population data which may be available. In some instances they will permit users to recombine published data into classes more suitable to their specific needs. With the exception of the over-all totals by age and sex mentioned above, the population figures may in some cases differ from corresponding figures (which are derived from different sample surveys) published in reports of the Bureau of the Census. For population data for general use, see the official estimates presented in Bureau of the Census reports in the P-20, P-25, P-50, P-57, and P-60 series.

Reliability of Estimates

Since the estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures. As in any survey, the results are also subject to measurement error.

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the standard error also reflects part of the variation which arises in the measurement process. It does not include estimates of any biases which might lie in the data. The chances are about 68 out of 100 that an estimate from the sample differs from the value obtained from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times as large.

In order to derive standard errors which are applicable to a wide variety of health statistics and which can be prepared at a moderate cost, a number of approximations are required. As a result, tables I through III, included in this Appendix should be interpreted as providing an estimate of the standard error rather than as the precise standard error for any specific statistic.

The following guides will enable the reader to determine sampling errors for the statistics presented in this report:

 Approximate standard errors for estimates of the number of cases of a chronic condition, the number of disability days associated with a chronic condition, and the number of persons in a population group¹ are obtained from the appropriate columns of table I.

 Approximate standard errors for percentage distributions of a chronic condition according to the number of bed-disability days or the extent of activity or mobility limitation associated with it are given in table II.

3. Approximate standard errors for prevalence estimates of a chronic condition per 1,000 persons in an age, sex, or color group or per 1,000 total population are obtained from table II. Since table II is set up for the estimation of the standard error of a rate per 100, the prevalence per 1,000 must first be converted to a percentage; table II is then entered with this percentage and the number of persons in the category (base of the percentage). The entry in the body of the

¹The number of persons in an age, sex, or color group, or the total number of persons in the population is not subject to sampling error.

table must then be multiplied by 10 to apply to the rate per 1,000 persons.

 Approximate standard errors of percentage distributions of disability days associated with a chronic condition (not computed in this report) are given in table III.

5. A rough approximation of the standard errors for rates showing the average number of disability days per "persons with the condition per year" is obtained by taking the square root of the sum of the square of the standard error of the numerator used in obtaining the rate divided by the numerator itself and the square of the standard error of the denominator used di-

vided by the denominator itself, and then multiplying by the rate. This computation will normally give an overestimate of the true sampling error.

Example:

It is estimated that each person with arthritis or rheumatism in the age group 55-64 had an average of 5.2 days of bed disability attributable to these conditions (table 5). The numerator of 14,507,000 days has a standard error of 1,452,000. The denominator of 2,769,000 persons with arthritis or rheumatism has a standard error of 95,000. Using these numbers as shown below yields an answer of 0.6, the standard error of the estimated rate.

$$5.2 \times \sqrt{\left(\frac{1,452,000}{14,507,000}\right)^2 + \left(\frac{95,000}{2,769,000}\right)^2} = 0.6$$

Table I. Standard errors of estimates of aggregates (all numbers shown in thousands)

Size of estimate	Persons with arthritis or rheumatism	Disability days
100	18	-
500	40	-
1,000	60 ·	400
2,000	80	560
3,000	100	720
5,000	130	960
10,000	180	1,200
20,000	240	1,760
30,000	260	2,160
50,000	280	2,800
100,000	320	4,400
200,000	-	6,400
500,000	-	12,000
750,000		16,800
1,250,000	**	25,600

illustration of use of table 1.—The estimated number of restricted-activity days reported by males with arthritis or rheumatism is 83,592,000 (table 5). Since the standard error for this figure cannot be read directly from table 1, it is necessary to interpolate. The standard error for an estimate of 50,000,000 days is 2,800,000, and the standard error for an estimate of j00,000,000 days is 4,400,000. Interpolation gives 3,875,000 as the standard error for 83,592,000 days.

 $^{^2\,\}mathrm{Note}$ that where the rate refers to persons in a disease category, rule 5 applies, even if the group is further subdivided by age, sex, or color.

Table II. Standard error of percentages based on persons with arthritis or rheumatism

For estimated percentages of:								
2 or 5 or 10 or 25 or 98 95 90 75				50				
The approximate standard error (expressed in percentage points) is:								
2.9 1.3 0.9 0.6 0.6 0.4 0.3	4.5 2.0 1.4 1.0 0.8 0.6 0.5 0.3	5.4 2.4 1.7 1.2 1.0 0.8 0.6 0.4	7.8 3.5 2.5 1.8 1.4 1.1 0.8 0.6	10.3 4.6 3.3 2.3 1.9 1.4 1.0 0.7				
	2 or 98 The a (e	2 or 95 The approximate (express 1.3 2.0 0.9 1.4 0.6 1.0 0.6 0.8 0.4 0.6 0.3 0.5	2 or 98 95 10 or 90 The approximate st (expressed in points) 2.9 4.5 5.4 1.3 2.0 2.4 0.9 1.4 1.7 0.6 1.0 1.2 0.6 0.8 1.0 0.4 0.6 0.8 0.3 0.5 0.6	2 or 98 95 10 or 25 or 75 The approximate standard (expressed in percenta points) is: 2.9 4.5 5.4 7.8 1.3 2.0 2.4 3.5 0.9 1.4 1.7 2.5 0.6 1.0 1.2 1.8 0.6 0.8 1.0 1.4 0.4 0.6 0.8 1.1 0.3 0.5 0.6 0.8 0.				

lijustration of use of table | | .-- Of the 3,898,000 persons with arthritis or rheumatism 65 years of age and over, 10.6 percent reported major limitation of activity (table 31. Since neither of these values can be read directly from the table, interpolation may be carried out as follows: for a base of 3,000,000, a statistic of 10 percent has a standard error of 1.0 percentage points, and a statistic of 25 percent has a standard error of 1.4 percentage points. Interpolating, with a base of 3,000,000 an estimate of 10.6 percent would have a standard error of 1.02 percentage points. Corresponding calculations with a base of 5,000,000 produce a standard error of 0.81 percentage points. A final interpolation between these two results yields an estimate of 0.93 percentage points which rounds to 0.9 for a statistic of 10.6 percent with a base of 3,898,000. Although interpolation has been carried out in two dimensions here to illustrate the use of the table, a simple scanning of the table will provide an approximate answer which will usually be sufficient.

Table III. Standard errors of percentages based on disability days

When the	For estimated percentages of:								
percentage is: (in thousands)	2 or 98	5 or 95	10 or 90	25 or 75	50				
	The a	express	mate st sed in p soints)	ercenta	error				
2,500 12,500 25,000 50,000	3.4 1.5 1.0 0.7	5.2 2.3 1.7 1.2	7.2 3.2 2.2 1.6	10.4 4.6 3.3 2.3	12.0 5.4 3.8 2.7				
75,000 125,000 250,000 500,000	0.6 0.5 0.3 0.2	1.0 0.7 0.6 0.4	1.3 1.0 0.7 0.5	1.9 1.4 1.0 0.7	2.2 1.7 1.2 0.9				

1 6. 1 C

APPENDIX II

DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Terms Relating to Chronic Conditions

Condition.—A condition is defined by an entry on the questionnaire which describes a departure from a state of physical or mental well-being. In the coding and tabulating process, conditions are first classified according to the type of disease, injury or impairment, or symptom and then according to a number of other criteria such as whether they were medically attended, whether they resulted in disability, and whether they were acute or chronic. For the purposes of each published report or set of tables, only those conditions recorded on the questionnaire which satisfy certain stated criteria are included.

Conditions, except impairments, are coded by type according to the International Classification of Diseases, 1955 Revision, with certain modifications adopted to make the coding procedure more suitable for a household-interview survey. Impairments, defined as chronic or permanent defects resulting from disease, injury, or congenital malformation, are coded according to a special supplementary classification which permits the classification of impairments by type of functional dis-

ability and etiology.

Chronic condition,—A condition is considered to be chronic if it is described by the respondent (1) in terms of one of the conditions on the "Check List of Chronic Conditions" or in terms of one of the impairments on the "Check List of Impairments" (Cards A and B, Appendix III), or (2) as having been first noticed more than three months before the interview. For this purpose, first noticed is defined as the time at which the person first felt sick or when he or his family was first told by a physician that he had a disease of which he was previously unaware. For a condition which is episodic in nature, the onset is always considered to be the original onset rather than the onset of the most recent episode.

Prevalence of a condition.—In general, the prevalence of a condition is the estimated number of cases existing in a population at a specific point in time or the average number existing during a specified period of time.

In the National Health Survey, the prevalence of a chronic condition is the number of cases reported to be present at the time of the interview or at any time during the 12 months prior to the interview. Estimates of the prevalence of chronic conditions may be restricted to cases which satisfy certain additional criteria. For example, only cases involving a day or more in bed during the past year or cases under care may be included.

Medically attended condition,—A condition is considered to be medically attended if a physician has been consulted about it either at its onset or at any time thereafter. Medical attention includes consultation either in person or by telephone for treatment or advice. Advice from the physician transmitted to the patient through the nurse is counted as well as visits to physicians in

clinics or hospitals. If during the course of a single visit the physician is consulted about more than one condition for each of several patients, each condition of each patient is counted as medically attended.

Discussions of a child's condition by the physician and a responsible member of the household are considered as medical attention even if the child was not seen at that time.

For the purpose of this definition, the term "phy-

sician" includes doctors of medicine and osteopathic physicians.

Condition under care.—By under care is meant one or more of the following: (1) currently taking medicine or treatment prescribed by a physician, (2) observing a systematic course of diet or activity prescribed by a physician, (3) visiting the physician regularly for checking on the condition, or (4) under instruction from the physician to return if some particular thing happens.

Physician is again defined as a doctor of medicine

or an osteopathic physician.

Terms Relating to Disability

Disability.—Disability is the general term used to describe a temporary or a long-term reduction of a person's activity as a result of a chronic condition.

Long-Term Disability

Chronic activity limitation.—Chronic activity limitation is ascertained for all persons with one or more chronic conditions. These persons are divided into 4 categories according to the extent to which their activities are limited as a result of the conditions (Cards C, D, E, and F, Appendix III). For the purpose of this report categories 2 and 3 have been combined.

Since the major activities of preschool children, school-age children, housewives, and workers and other persons differ, a different set of criteria is used to determine the amount of reduction of major activities for each group. However, there is a general similarity between the criteria as will be seen in the descriptions

of the categories below.

Major limitation of activity, -Inability to carry on

major activity of the group;

Preschool children: inability to take part in ordinary play with other

children

School-age children:

Housewives:

inability to go to school: inability to do any house-

work

Workers and all other persons:

inability to work at a job

or business

Partial limitation of activity.—Limitation of amount or kind of participation in major activity of the group;

Preschool children;

limited in the amount or kind of play with other

children

School-age children:

limited to certain types of schools or in school attendance; limited in participation in athletics or other extracurricular ac-

tivities

Housewives:

limited in amount or kind of housework or limited in recreational or community activities

Workers and all other persons:

limited in amount of work or kind of employment or limited in recreational or community activities

No limitation of activity. -- No limitation as described above.

Chronic mobility limitation.—Persons with one or more chronic conditions are also classified according to the extent of limitation of mobility (Card G, Appendix III). The four categories describing the extent of mobility limitation, which have been combined into three for the purpose of this report, are used in the classification of persons regardless of their major activity status.

1. Major limitation of mobility.—Confined to the house except in case of emergencies.

Partial limitation of mobility.—Limited or in need of help in moving around outside the house.
 No limitation of mobility.—No limitation as described above.

Temporary Disability

Disability days.—Disability days are classified according to whether they are days of restricted activity, days in bed, days in the hospital, days lost from work, or days lost from school. All hospital days are, by definition, days of bed disability; all days of bed disability

are, by definition, days of restricted activity. The converse form of these statements is, of course, not true. Days lost from work and days lost from school are also days of restricted activity for the working and schoolage populations. Hence, restricted activity is the most inclusive term used in describing disability days.

Restricted-activity day.—A day on which because of a specific illness or injury a person substantially reduces the amount of activity normal for that day. The type of reduction will vary with the age and occupation of the individual as well as with the day of the week or the season. Restricted activity thus covers a range from substantial reduction of normal activity to complete inactivity.

Bed-disability day.—A day on which more than half the daylight hours were spent in bed because of a specific illness or injury. All hospital days for inpatients are considered to be days of bed disability even if the patient was not actually in bed at the hospital.

Work-loss day.—A normal working day on which a person did not work at his job or business because of a specific illness or injury. The number of days lost from work is determined only for persons 17 years of age or older.

Demographic Terms

Age.—The age of the person on his last birthday recorded on the questionnaire in single years. Ages are then grouped in intervals suitable for the topic under discussion.

Usually working.—A term applied to an individual 17 years of age or older who was gainfully employed as a paid employee, a self-employed person, or as a worker in a family business for more than half of the 12 months prior to the interview. A person who does only volunteer or unpaid work—such as work in his own home or work for the church or community—is not considered to be gainfully employed.

APPENDIX III

QUESTIONNAIRE

The items below show the exact content and wording of the questionnaire used in the household survey. The actual questionnaire is designed for a household as a unit and includes additional spaces for reports on more than one person.

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Gard A	Card C	Card E	Card G
NATIONAL HEALTH SURVEY	NATIONAL HEALTH SURVEY	NATIONAL HEALTH SURVEY	NATIONAL REALTH SURVEY
Check List of Chronic Conditions	For: Workers and other persons except	For: Children from 6 to 16 years old and	
1. Asthma 2. Any allergy kidney trouble 3. Tuberculosis	Housevives and Children L. Cannot work at all at present	others going to school	
			1. Loning to the house all the time, except in emergencies.
Rheumatic fever Hardening of the arteries	3. Can work but limited in kind or	z. van go to school but limited to certain types of schools or in school ettendance.	2. Can go outside but need the help of another person in getting around outside.
8. High blood pressure 21. Epilepsy or Convulsions 9. Heart trouble 22 Mart 17. Stroke 22 Marts 1. Ar nor convention 20. Stroke 22 Marts 1. Ar nor convention 22.	#	 Can go to school but limited in other activities. 	3. Can go outside alone but have trouble in getting around freely.
with varicose veins colors or piles 23.		4. Not limited in any of these ways.	a. Not limited in any of these ways.
13. Stomach ulcer trouble 21. Tumor or cancer 15. Any other chronic 25. Chronic skin frouble			
Stomach trouble 26. Hernia of fupture			
Card 8	Card D	Card F	Card H
٠			
NATIONAL HEALTH SURVEY	NATIONAL HEALTH SURVEY	NATIONAL HEALTH SURVEY	HATIONAL HEALTH SURYEY
Check List of impairments	For: Housewife	For: Children under 6 years old	Family Income during past
1. Deafness or serious trouble with hearing.	1. Cannot keep house at all at	1. Cannot take part at all in ordinary	1. Under \$500 (Including loss)
2. Serious trouble with seeing, even with glasses.	present	play with other children.	2. \$500 - \$999
 Condition present since birth, such as cleft palate or club foot. 	 Can keep house but limited in amount or kind of housework. 	 Can play with other children but limited in amount or kind of play. 	3. \$1,000 - \$1,999
4. Stammering or other trouble with speech.	 Can keep house but limited in outside activities. 	u. Not limited in any of these ways.	4. \$2,000 - \$2,999
5. Missing fingers, hand, or arm.	4. Not limited in any of these ways.		5. 53,000 - 53,999
6. Missing toes, foot, or leg.			666 18 - 000 18 - 9
7. Cerebral palsy.			777 C C C C C C C C C C C C C C C C C C
8. Paralysis of any kind.			777 TO COO COU
9. Any permanent stiffness or deformity of the foot or leg, finners, arm or hark			3. 510,000 and over.

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